What is claimed is:

1. A light directing film having an x-axis, a y-axis, and a z-axis, the film comprising a first structured surface and an opposing surface, the structured surface comprising a plurality of elongate prismatic structures thereon, the elongate prismatic structures:

extending generally along the x-axis;

having a spacing along the y-axis between adjacent prismatic structures; and

having a height along the z-axis, the height of the prismatic structure varying along the x-axis in a repeating period.

2. The light directing film according to claim 1, wherein the repeating period is defined by a repeating wave period along the x-axis.

3. The light directing film according to claim 2, wherein the wave period is a sine wave.

4. The light directing film according to claim 1, wherein the prismatic structure includes a randomness along the z-axis.

5. The light directing film according to claim 4, wherein the randomness is superimposed on the repeating period.

6. The light directing film according to claim 1, wherein the varying height of the prismatic structure provides diffusion in an XZ plane defined by the x-axis and the z-axis.

7. The light directing film according to claim 1, wherein the film, when measured on an ELDIM EZ Contrast model 160R used in the reflective mode with 34 degree incident collimated light, has a measured vertical angle of view of at least 15 degrees.

8. The light directing film according to claim 7, wherein the film, when measured on an ELDIM EZ Contrast model 160R used in the reflective mode with 34 degree incident collimated light, has a measured vertical angle of view of at least 20 degrees.

9. The light directing film according to claim 1, wherein the spacing along the y-axis between adjacent prismatic structures varies along the x-axis.

10. The light directing film according to claim 10, further comprising a reflective coating on the light reflecting film.

11. The light directing film according to claim 10, wherein the reflective coating is a metallic coating.

12. An optical device comprising a microreplicated light reflecting film, the film comprising a plurality of prismatic structures having a length and a width, each of the plurality of prismatic structures having a height varying in a repeating pattern along the length.

13. The optical device according to claim 12, further comprising a reflective coating on the light reflecting film.

14. The optical device according to claim 13, wherein the reflective coating is a metallic coating.

15. The optical device according to claim 12, further comprising polarizer.

16. An article made using a programmably controlled cutting tool, the article having an x-axis, a y-axis, and a z-axis, the article comprising a plurality of structures extending generally along the x-axis, the plurality of structures having a spacing along the y-axis between adjacent prismatic structures, and the structures having a height along the z-axis, the height of the structure varying along the x-axis in a repeating pattern.

17. A method of making a reflective structured film comprising:

(a) machining a master tool from a blank with a cutting tool, the cutting tool being movable in an x-direction, a y-direction, and a z-direction, the machining comprising:

(i) contacting the blank with the cutting tool;

(ii) moving at least one of the blank and the cutting tool in relation to one another in the x-direction to cut the blank;

(iii) moving at least one of the blank and the cutting tool in relation to one another in the y-direction to cut the blank; and

(iv) moving at least one of the blank and the cutting tool in relation to one another in the z-direction to cut the blank.

(b) forming a structured film on the master tool; and

(c) applying a reflective coating to the structured film.

18. The method according to claim 17, wherein:

(a) the blank is a cylinder having a length and a circumference; and

(b) the x-direction is the cylinder circumference, the y-direction is the cylinder length.

19. The method according to claim 17, wherein the step of moving at least one of the blank and the cutting tool in relation to one another in the z-direction comprises moving at least one of the blank and the cutting tool in relation to one another in the z-direction by a fast tool servo.

20. The method according to claim 19, wherein the fast tool servo is driven by a digital signal.

21. The method according to claim 20, wherein the digital signal is computer generated.

22. The method according to claim 19, wherein the fast tool servo is driven by an analog signal.

23. The method according to claim 17, wherein the cutting tool comprises a precisely curved cutting bit, the cutting bit comprising one of diamond, tungsten carbide, or cubic boron nitride.

24. The method according to claim 23, wherein the precisely curved cutting bit is selected to provide the structured film with a desired light reflectance.